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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/971,881      | 10/05/2001  | Stanford R. Ovshinsky | 2075                | 4506             |

24963 7590 03/27/2003

ENERGY CONVERSION DEVICES, INC.  
2956 WATERVIEW DRIVE  
ROCHESTER HILLS, MI 48309

EXAMINER

VO, HAI

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1771

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/971,881

Applicant(s)

OVSHINSKY ET AL.

Examiner

Hai Vo

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 21-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 31-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-20, 31-34, drawn to a semiconductor body, classified in class 136, subclass 261.
  - II. Claims 21-30, drawn to a process of making a semiconductor body, classified in class 438, subclass various.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another and materially different process such as one that treats the semiconductor material with laser instead of plasma.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
3. During a telephone conversation with Kevin L. Bray on 03/11/2003 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-20, 31-34. Affirmation of this election must be made by applicant in replying to this Office action. Claims 21-30 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-18, and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Ovshinsky et al (US 6,087,580). Ovshinsky discloses a non-single crystal silicon alloy material including regions of intermediate range order that has atomic aggregates of very short range periodicity and comprises of a plurality of highly order, relatively small atomic aggregations no more than 50 atomic diameter. The claimed range of thickness is completely within the values disclosed by Ovshinsky. The semiconductor comprises germanium, carbon, oxygen, dopant (column 9, line 10). The semiconductor includes hydrogen, fluorine, nitrogen (column 4, lines 58-62). The semiconductor material has the coordinatively irregular structures disposed in a matrix which is a mixture of amorphous and microcrystalline materials (claim 1). The material is in form of a thin film which is useful in devices such as photovoltaic devices, diodes, transistors and photoreceptors. It is the examiner's position that Ovshinsky anticipates the claimed subject matter.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ovshinsky et al (US 6,087,580). Ovshinsky does not disclose the width of each of aggregations. Ovshinsky does disclose the exact dimension of the aggregations in the semiconductor material will depend upon the particular semiconductor material in question (column 6, lines 8-10). Since the width of aggregations is not critical to providing unexpected results and the semiconductor material is widely used in a variety applications, in the absence of unexpected results, the exact dimension of the aggregations in the semiconductor material would have been recognized by one skilled in the art as dependent upon the particular semiconductor material in use and to improve it suitable to its uses.
8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ovshinsky et al (US 6,087,580) as applied to claim 1 above, in view of Tsuo et al (US 5,627,081). Ovshinsky is silent as to the porosity of the silicon. Tsuo teaches a porous silicon having been useful for photovoltaic solar cell applications (abstract, example 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the form a porous semiconductor material of Ovshinsky motivated by the desire to improve it suitable to its uses.

### ***Double Patenting***

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-18, and 31-34 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6,087,580. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons set forth in the 102 rejections above.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (703) 605-4426. The examiner can normally be reached on Tue-Fri, 8:30-6:00 and on alternating Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned


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are (703) 872-9310 for regular communications and (703) 872-9311 for After  
Final communications.

Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the receptionist whose telephone number is  
(703) 308-0661.

HV  
March 20, 2003



TERREL MORRIS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700